

# Unit Planning Guide: Grade 3 Unit 1 of 6

<b>Unit Title:</b> Place Value; Addition and Subtraction	<b>Pacing (Duration of Unit):</b> 3 weeks
<b>Grade:</b> 3	<b>Buffer Day(s):</b> 2

## Desired Results

### Transfer Goals (Priority practice standards in **bold**)

*Students will be able to independently use their learning to:*

- MP.1. **Make sense of problems and persevere in solving them.**
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. **Model with mathematics.**
- MP.5. Use appropriate tools strategically.
- MP.6. **Attend to precision.**
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

### Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

#### Prerequisite Standards:

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#### Standards (Priority Standards in **bold**):

- **3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.**
- **3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.**
- 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation

#### WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

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strategies, including rounding.

- 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

### Meaning (\*Mostly assessed through Performance Tasks/Assessments)

**Big Ideas:** (Statements and concepts written in teacher friendly language which reflect the important [but not obvious] generalizations we want students to be able to arrive at. These are used by the teacher to focus daily instruction.)

- Numbers can be composed and decomposed in many ways.
- Addition and subtraction are related algorithms.
- Sometimes it is necessary to make sense of problems and persevere to solve them.
- Using rounding is an appropriate estimation strategy for solving problems and estimating.
- Rounded numbers are approximate and not exact.

**Essential Questions:** (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- Why do we compose and decompose numbers?
- How can the use of estimation help us make logical problem solving decisions?
- What makes 0 unique?
- How can I use addition and subtraction to solve real world problems?

### Acquisition (\*Mostly assessed through traditional summative assessments)

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**Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

*Students will know ...*

- Algorithms for addition, with an emphasis on the standard algorithm
- Algorithms for subtraction, with an emphasis on the standard algorithm
- there's something here ^ that can be better said... "this stuff can be done in order to add and subtract."
- That the base ten system is the method used in rounding
- Relationship between addition and subtraction (inverse operations)
- That a number line extends into the positive and negative domains

**Key Academic Vocabulary:**

- place value, round, addition, add, addend, sum, subtraction, subtract, difference, strategies, Vocabulary associated with word problems (altogether= addition, left= subtraction)

**Skills:** The discrete skills and process students should be able to use independently.

*Students will be skilled at:*

- Fluently adding and subtracting with and without regrouping within 1000 (Understanding, Applying)
- Standard and expanded forms of numbers (Applying)
- Rounding numbers to the nearest 10; 100 (Applying)
- Apply estimation to solve problems (Applying)
- Compose/decompose number using expanded form, compatible numbers (Analyzing)
- Utilizing a number line and a hundreds chart as a tool to support their work with addition, subtraction and rounding
- Solving two-step word problems using the four operations.
- Representing word problems using an equation with the unknown quantity represented with a letter.
- Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations.

### Resource Suggestions:

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